TACSM Abstract – Clinical Teaching!

Tibial Stress Fracture with Dreaded Black Line in a Collegiate Triple Jumper

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ABSTRACT

CLINICAL PRESENTATION & EXAM: A twenty-two year old collegiate triple jumper presents with tenderness over the tibial shaft along the medial border. During the evaluation the athlete cannot recall a specific incident that caused the pain, but notes that it has been ongoing for a few weeks. Initially achy pain was present during activity, but developed to a sharp and unusual pain while at rest. Percussion test, bump test, and squeeze test are used during the physical examination to detect possible fractures. **ANATOMY & PATHOLOGY**: The tibia is located in the lower leg along with the fibula. The tibia is the larger of the two bones and responsible for absorbing majority of the forces when performing weight-bearing activities. Increase stress and overloading the tibia too quickly can cause micro-cracks in the bone. **DIAGNOSTIC TESTING & CONSIDERATIONS**: After the initial evaluations are performed, CT scans can be done to detect any cracks in the bone. It isn't uncommon for the plain films to be negative in the case of a stress fracture, even if the athlete presents with signs of a fracture. An MRI was ordered and the results showed a tibial stress fracture with a DBL (dreaded black line). **TREATMENT & RETURN TO ACTIVITY**: Conservative treatments did not prove to be a benefit, and the patient had to undergo two PRP injections. Tibial stress fractures that present with a DBL usually require surgery to be fixed. A rod would be implanted and used to absorb bodily stress. This method was not ideal seeing as the patient was a triple jumper and the rod would prevent her from performing at a high level. Athletic trainers must be knowledgeable in implementing different treatment options when rehabilitating their athletes if the decide to opt out of surgical intervention.